

REMARKS

Claims 1 to 13, 15 and 16 are pending.


As previously discussed in the amendment filed October 18, 2005, the motivation for the applicant's invention came about after understanding that in high surface area stimulation compounds, there can be a certain percentage of unreacted species. A species of relatively small diameter such as Ti^{+4} can, quite literally, "rattle around". Over time, these species can react with the body environment giving rise to unwanted polarization effects. In the case of titanium nitride, there is some percentage of unreacted titanium that reacts with the body environment to form Ti_2O_5 , which is comparatively resistive with high polarization. Amorphous carbon having relatively little porosity on its own, but exhibiting excellent conductivity, prevents this parasitic reaction from taking place without compromising the inherently good conductivity of the intermediate layer. In that respect, claims 4 and 13 have been amended to remove noble metals and their compounds from those suitable for use in the intermediate layer. The intermediate layer is then protected from parasitic side reactions by the amorphous carbon-containing coating.

Again, none of the prior art references appreciated this problem; much less propose a solution, regardless the deposition process for the carbonaceous outer layer. There is simply no hint or suggestion in Maloney et al., O'Brien et al., Edeling et al., Frericks et al. or Schaldach et al. that an intermediate coating exhibiting good biocompatibility and low polarization, but containing unreacted species, such as of titanium nitride, can be improved upon by an outer coating of

carbon in any of its allotropic forms. Accordingly, it is believed that under a fair reading of the prior art applied under a reasonable interpretation of the patent laws, pending claims 1 to 13, 15 and 16 are patentable.

It is believed that claims 1 to 13, 15 and 16 are now in condition for allowance. Notice of Allowance is requested.

Respectfully,


Michael F. Scalise
Reg. No. 34,920

Greatbatch, Inc.
9645 Wehrle Drive
Clarence, New York 14031
(716) 759-5810
November 17, 2005